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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,639	11/04/2003	Charles T. Force	FORC3001/BEU	3941
23364 7590 03/02/2010 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314-1176				
EXAMINER				
CHIAN, RICHARD				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/699,639

Applicant(s)

FORCE ET AL.

Examiner

RICHARD CHAN

Art Unit

2618

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-39 and 42-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-37, 39 and 42-51 is/are rejected.
- 7) ☒ Claim(s) 38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see arguments, filed 12/09/09, with respect to the rejection(s) of claim(s) 26, 33, 36, 45, and 46 under 35 U.S.C 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of in view of Levin et al. (US 6,201,827).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 26, 28, 36, 37, 39 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yi (US 5,907,582) in view of Levin et al. (US 6,201,827).

With respect to claim 26, Yi discloses the receiver Fig.5 for use in receiving satellite broadcasts, comprising: a small antenna 152 providing nearly hemispherical coverage; (Col.11 line 17)

a low noise amplifier 154 connected to amplify a signal received by the antenna 152; (Col.11 line 19-21)

a plurality of receiver channel processors 166 connected to the low noise amplifier 154 and the sync detection 168 and demodulation unit 170, each channel processor including a spread spectrum decoder, a demodulator, and an error correction decoder, for recovering baseband signals. (Col.11 line 37-54)

However Yi does not specifically disclose wherein a sync detection step and demodulation unit connected to recover timing signals from an amplified signal output by the low noise amplifier.

The Levin reference, specifically Fig.2 and 3 disclose wherein an antenna 122A receives signals from satellite 108A. (Col.4 line 28-31) The antenna transmits the signal to a base station 110A which is described in Fig.2. A block diagram of base station is described in detail in Fig.3, wherein a search processor 304 (reads on Sync detect & demodulation unit 5a of instant application) which operates in parallel to demodulator unit front end 306. (Col.6 line 24-51)

It would have been obvious to one of ordinary skill in the art to implement a separate search processor as disclosed by Levin to the receiver of Yi in order to determine the "carrier" signals being received from weak satellite strengths signals and then be able to process the incoming signals separately.

With respect to claim 28, Yi combined with Levin continues to disclose the receiver as claimed in claim 26, wherein the receiver is capable of receiving and processing redundant signals that are time-delayed signals or signals broadcast by different satellites 104 & 106. (SAT 1 and SAT 2) (Col.11 line 24-27)

With respect to claim 36, Yi combined with Levin continues to disclose the receiver as claimed in claim 26, Levin continues to disclose wherein said sync detection and demodulation unit 304 includes an active carrier tracking processor. (a search processor 304 reads on Sync detect & demodulation unit 5a of instant application)

With respect to claim 37, Yi combined with Levin continues to disclose the receiver as claimed in claim 36, Levin continues to disclose wherein said sync detection 304 and demodulation unit 306 further includes a sync processor for detecting and demodulating a CW clock tone.

With respect to claim 39, Yi and Levin reference combined discloses the receiver as claimed in claim 26, however Levin discloses a DSSS system introduced to a CDMA system used for spreading. (Col.2 line 10-23)

It would have been obvious to one of ordinary skill in the art to implement a DSSS system for spreading the spectrum as disclosed by Levin with the Yi reference in order to implement a specific spreading.

With respect to claim 46, Yi combined with Levin continues to disclose the receiver as claimed in claim 26, Yi reference further comprises a channel assembler 66 for assembling data packets output by the combiner if the satellite broadcast includes packetized data. (Col.4 line 7-10)

4. Claims 29-35, 42, 44, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yi (US 5,907,582) in view of Levin et al. (US 6,201,827).

With respect to claim 29, Yi and Levin reference combined discloses the receiver as claimed in claim 26, the examiner takes Official notice that said antenna is a phased array antenna.

With respect to claim 30, Yi and Levin reference combined discloses the receiver as claimed in claim 29, the examiner takes Official notice of said antenna is a conformal retrodirective phased array antenna.

With respect to claim 31, Yi and Levin reference combined discloses the receiver as claimed in claim 29, the examiner takes Official notice of said antenna is a square flat flexible panel.

With respect to claim 32, Yi and Levin reference combined discloses the receiver as claimed in claim 29, the examiner takes Official notice of said element in the phased array is a crossed dipole.

With respect to claim 33, Yi and Levin reference combined discloses the receiver as claimed in claim 26, wherein said amplifier includes a Field Effect Transistor.

With respect to claim 34, Yi and Levin reference combined discloses the receiver as claimed in claim 33, the examiner takes Official Notice wherein said amplifier includes a High Mobility Electron Field Effect Transistor for at least one element of said antenna.

With respect to claim 35, Yi and Levin reference combined discloses the receiver as claimed in claim 34, the examiner takes Official Notice wherein said amplifier includes an Indium Gallium Arsenide High Mobility Electron Field Effect Transistor.

With respect to claim 42, Yi and Levin reference combined discloses the receiver as claimed in claim 26, the examiner takes Official Notice wherein a number of said channel processors is equal to a number of channels being received at any one time.

With respect to claim 44, Yi and Levin reference combined discloses the receiver as claimed in claim 26, the examiner takes Official Notice wherein at least one additional said receiver channel processor is used to process emergency or public service information.

With respect to claim 47, Yi and Levin reference combined discloses the receiver as claimed in claim 26, the examiner takes Official Notice wherein the receiver further

comprising at least one processor selected from the group consisting of an audio format processor and a video format processor.

5. Claims 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yi (US 5,907,582) in view of Levin et al. (US 6,201,827) in view of Woodworth (US 4,876,737).

With respect to claim 27, the Yi and Levin reference combined discloses the receiver as claimed in claim 26, however Yi and Levin reference combined does not specifically disclose wherein said satellite broadcasts are C-band satellite broadcasts.

The Woodworth reference however discloses a satellite C-Band broadcasts.
(Col.1 line 56-61)

It would have been obvious to one of ordinary skill in the art to one of ordinary skill in the art to implement C-Band broadcast as disclosed by Woodworth with the receiver of Yi and Levin reference combined in order to operate in the C-Band.

6. Claims 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yi (US 5,907,582) in view of Levin et al. (US 6,201,827) in view of Assal (US 4,931,802).

With respect to claim 43, Yi and Levin reference combined discloses the receiver as claimed in claim 26, wherein a first said receiver channel processor is used for a first

primary data channel 58, a second said receiver channel processor is used for a second primary data channel, Fig.2 (Col.6 line 29-41)

However the Yi and Levin reference combined reference does not specifically disclose a third said receiver channel processor is used for one of a time-delayed redundant signal and a signal received from a second satellite.

The Assal reference however discloses said redundant signals including one of a time-delayed redundant signal and a redundant signal received from a second satellite. (Col. 13 line 56- Col.14 line 2)

It would have been obvious to one of ordinary skill in the art to combine the time-delayed redundant signal as disclosed by Assal reference with the Yi and Levin reference combined in order to properly sync signals.

7. Claims 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yi (US 5,907,582) in view of Levin et al. (US 6,201,827) in view Saegusa (US 6,198,914).

With respect to claim 48, Yi and Levin reference combined discloses the receiver as claimed in claim 26, however does not specifically disclose wherein the receiver is further comprising a GPS receiver chip arranged to automatically update receiver geographic position so that when a broadcast of emergency or public service information is detected, regular operation of said receiver may be preempted if said receiver is within an area affected by said emergency or public service information.

The Saegusa reference however discloses an emergency call system wherein the GPS automatically updates the location in order to alert emergency officials when an emergency is detected. (Col.3 line 64-Col.5 line 9)

It would have been obvious to one of ordinary skill in the art to implement a GPS system to alert emergency call system in case an emergency is detected as disclosed by Saegusa with the Yi and Levin reference combined in order to provide geographical information to the user of the satellite receiver.

8. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yi (US 5,907,582) in view of Levin et al. (US 6,201,827) in view of Woodworth (US 4,876,737) and in view Schmidt (US 4,985,707)

With respect to claim 49, Yi discloses the receiver, comprising: a small antenna 152 providing nearly hemispherical coverage; (Col.11 line 17)

a low noise amplifier 154 connected to amplify a signal received by the antenna 154; (Col.11 line 19-21)

and a plurality of receiver channel processors 58 connected to the low noise amplifier 74 and the sync detection and demodulation unit 170, each channel processor 56 including a spread spectrum decoder, a demodulator, and an error correction unit, for recovering signals, (Col.11 line 37-54) however Yi does not specifically disclose wherein said antenna is a conformal retrodirective phased array antenna and wherein the signals are baseband signals.

However Yi does not specifically disclose wherein a satellite C-Band broadcasts through a retrodirective phased antenna array and comprise a sync detection step and demodulation unit connected to recover timing signals from an amplified signal output by the low noise amplifier.

The Levin reference, specifically Fig.2 and 3 disclose wherein an antenna 122A receives signals from satellite 108A. (Col.4 line 28-31) The antenna transmits the signal to a base station 110A which is described in Fig.2. A block diagram of base station is described in detail in Fig.3, wherein a search processor 304 (reads on Sync detect & demodulation unit 5a of instant application) which operates in parallel to demodulator unit front end 306. (Col.6 line 24-51)

It would have been obvious to one of ordinary skill in the art to implement a separate search processor as disclosed by Levin to the receiver of Yi in order to determine the "carrier" signals being received from weak satellite strengths signals and then be able to process the incoming signals separately.

The Woodworth reference however discloses a satellite C-Band broadcasts. (Col.1 line 56-61)

It would have been obvious to one of ordinary skill in the art to one of ordinary skill in the art to implement C-Band broadcast as disclosed by Woodworth with the receiver of Yi in order to operate in the C-Band.

The Schmidt reference however discloses a retrodirective phased antenna array.
Fig.2

It would have been obvious to one of ordinary skill in the art to implement the retrodirective phased antenna as disclosed by Schmidt to the receiver of Yi in order to implement a specific type of antenna.

9. Claims 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yi (US 5,907,582) in view of Levin et al. (US 6,201,827) in view of Woodworth (US 4,876,737) in further view Assal (US 4,931,802) and in view of Wright (US 6,466,569).

With respect to claim 50, Yi discloses the receiver comprising:

a small antenna 152 providing nearly hemispherical coverage; a low noise amplifier 154 connected to amplify a signal received by the antenna; (Col.11 line 17)

and a plurality of receiver channel processors connected to the low noise amplifier 154 and the sync detection and demodulation unit 170, each channel processor 58 including a spread spectrum decoder, a demodulator 170, and an error correction unit, for recovering signals wherein a satellite receiver is able to encode and decode baseband signals with baseband unit (Col.11 line 37-54) wherein a first said receiver channel processor is used for a first primary data channel, a second said receiver channel processor is used for a second primary data channel however the Yi reference does not specifically disclose a third said receiver channel processor is used for one of a time-delayed redundant signal and a signal received from a second satellite or when the receiver operates with the C-Band frequency.

However Yi does not specifically disclose wherein said redundant signals including one of a time-delayed redundant signal and a redundant signal received from a second satellite and a sync detection step and demodulation unit connected to recover timing signals from an amplified signal output by the low noise amplifier.

The Levin reference, specifically Fig.2 and 3 disclose wherein an antenna 122A receives signals from satellite 108A. (Col.4 line 28-31) The antenna transmits the signal to a base station 110A which is described in Fig.2. A block diagram of base station is described in detail in Fig.3, wherein a search processor 304 (reads on Sync detect & demodulation unit 5a of instant application) which operates in parallel to demodulator unit front end 306. (Col.6 line 24-51)

It would have been obvious to one of ordinary skill in the art to implement a separate search processor as disclosed by Levin to the receiver of Yi in order to determine the "carrier" signals being received from weak satellite strengths signals and then be able to process the incoming signals separately.

The Assal reference however discloses said redundant signals including one of a time-delayed redundant signal and a redundant signal received from a second satellite. (Col. 13 line 56- Col.14 line 2)

It would have been obvious to one of ordinary skill in the art to combine the time-delayed redundant signal as disclosed by Assal reference with the Ramberg reference in order to properly sync signals.

The Woodworth reference however discloses a satellite C-Band broadcasts. (Col.1 line 56-61)

It would have been obvious to one of ordinary skill in the art to one of ordinary skill in the art to implement C-Band broadcast as disclosed by Ramberg with the receiver of Ramberg in order to operate in the C-Band.

10. Claims 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yi (US 5,907,582) in view of Levin et al. (US 6,201,827) in view of Woodworth (US 4,876,737) in further view Assal (US 4,931,802) in view Saegusa (US 6,198,914).

With respect to claim 51, Yi, Levin, Woodworth, and Assal combined disclose the receiver as claimed in claim 50, however the 3 references do not specifically disclose wherein at least one additional said receiver channel processor is used to process emergency or public service information.

The Saegusa reference however discloses an emergency call system wherein the GPS automatically updates the location in order to alert emergency officials when an emergency is detected. (Col.3 line 64-Col.5 line 9)

It would have been obvious to one of ordinary skill in the art to implement a GPS system to alert emergency call system in case an emergency is detected as disclosed by Saegusa with the Li, Levin, Woodworth, and Assal receiver combined.

Allowable Subject Matter

11. Claim 38 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claim 38, the prior art does not specifically disclose the receiver as claimed in claim 36, wherein one said sync processor processes a sync signal for a primary transponder, and a second said sync processor processes a sync signal for an unsynchronized second transponder on the same or another satellite.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD CHAN whose telephone number is (571)272-0570. The examiner can normally be reached on Mon-Fri 10AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571)272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nay A. Maung/
Supervisory Patent Examiner, Art Unit 2618

/Richard Chan/
Examiner, Art Unit 2618